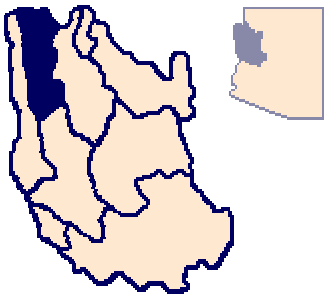
DETRITAL VALLEY BASIN



The Detrital Valley basin is located in northwestern Arizona and encompasses approximately 875 square miles (Figure 13). The basin is in the Basin and Range province and is bounded by the White Hills and Cerbat Mountains to the east, the Black Mountains to the west, and a low topographic rise to the south that separates it from the adjacent Sacramento Valley basin. The valley floor slopes northward from 3,400 feet to 1,200 feet above mean sea level where Detrital Wash drains into Lake Mead. Maximum altitude in the basin is 7,148 above mean sea level in the Cerbat Mountains.

Groundwater occurs mostly in the basin-fill material and at shallow depths in the alluvial deposits along the mountain washes. Groundwater flows in a northerly direction with depth to groundwater ranging from 20 feet at Lake Mead to over 780 feet below land surface at the south end of the basin (Dillenburg, 1987). Depth to bedrock exceeds 6,000 feet below land surface at its deepest point (Oppenheimer and Sumner, 1980). Well yields of up to several hundred gallons per minute have been reported in the basin-fill. (Dillenburg, 1987).

There are an estimated 1.0 million acre-feet of groundwater in storage in Detrital Valley basin (Arizona Department of Water Resources, 1988) with less than 1,000 acre-feet recharged annually (Freethey and Anderson, 1986). Most of the 190 acre-feet pumped in 1985 (Arizona Department of Water Resources, 1988) were used for domestic purposes. Historical groundwater data are limited, however, little change in water levels suggests the basin is in a steady-state condition (Arizona Department of Water Resources, 1988). Most of the groundwater is of suitable quality for domestic and other purposes with only isolated areas containing high dissolved solids and fluoride concentrations (Dillenburg, 1987).